

REMARKS

Reconsideration of the pending application is respectfully requested. Claims 36-62 remain pending in the present application. Applicant's Attorney appreciates the personal interview on Aug. 21, 2006 and has drafted new Claim 61 incorporating the discussed claim language. Additionally, new Claim 62 is currently being added.

35 U.S.C. § 102(b) Rejections

Claims 36-39 and 43-46, 59 and 60 are rejected under 35 U.S.C. §102(b) as being anticipated by Kahler (U.S. Patent No. 5,888,262). Claim 36 has been amended to incorporate having increments of spaced formed material increments being adhered to a substantially planar surface of adjacent opposed successive pleat flanks.

Kahler teaches having spacers in communication with corrugations as follows:

FIG. 1a shows, in highly simplified form, a filter insert 1A, which is substantially box-shaped in its outer configuration, consisting of a glass fiber filter fleece 2 impregnated with synthetic resin, which is provided with *corrugation-like depressions 3 stamped on one side* and is folded in a substantially zigzag-shaped with (slightly rounded) upper and lower fold edges 4a and 4b, so that the depressions 3 stamped in face each other in every two adjacent fold walls 5. The depressions or corrugations 3 are at an increasing distance from the lower fold edges 4b, ie. as the width of opening of the folds increases.

The fold spacings of the folds are made so great (in order to achieve certain parameters of use) that the top surfaces of depressions 3 located opposite one another do not touch one another.

On each of the top surfaces 3a is a layer of adhesive 6 which becomes thicker towards the lower fold edges 4b. *The adhesive layers of top surfaces 3a lying opposite one another are joined together, as a result of which (once the adhesive has cured) the opposing depressions 3 and hence the corresponding fold walls 5 are firmly joined together* and support one another substantially rigidly so that the filter insert 1 is mechanically rigid. Kahler, col. 6, lns. 39-62.

Claim 36 has been amended to incorporate having substantially planar pleat flanks. As shown in the above excerpt and each of the 22 figures in Kahler, Kahler discloses having corrugated pleat flanks and fails to disclose planar pleat flanks as currently claimed. Additionally, applicant is currently claiming increments of spaced formed material increments being adhered to the substantially planar surface of adjacent opposed successive pleat flanks. This too is not disclosed in Kahler as Kahler discloses having adhesive layers on top surfaces of opposing depressions. Furthermore, Applicant is claiming flanks having minimal wave formation (shown in Figs. 10A-10C and disclosed in para. 44 of the instant application) which is not taught in Kahler.

Since Kahler fails to disclose substantially planar pleat flanks, increments of spaced formed material increments being adhered to the substantially planar surface of adjacent opposed successive pleat flanks, and pleat flanks having minimal wave formation, as presently claimed, Applicant respectfully requests said rejection be withdrawn.

35 U.S.C. § 103 Rejections

Claim 47 is rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being unpatentable over Kahler.

Claim 47 depends from Claim 36 and hence has the limitations therein through claim dependency. Since Kahler fails to disclose or even suggest substantially planar pleat flanks, increments of spaced formed material increments being adhered to the substantially planar surface of adjacent opposed successive pleat flanks, and pleat flanks having minimal wave formation, as presently claimed, Applicant respectfully requests said rejection be withdrawn.

Claims 40-42, 48, 50-52, and 54-56 are rejected under 35 U.S.C. §103(a) as being obvious over Kahler in view of Enbom (U.S. Patent No. 5,071,555) and Cusick et al. (U.S. Patent No. 5,993,501).

Enbom teaches having material increments adjacent or even on the filter face crests.

Enbom, FIGs. 1-4. Cusick et al. teaches:

The composite filter media of the present invention includes a low, medium or high efficiency fibrous filtration layer of randomly oriented fibers (e.g. mineral fibers such as fine glass fibers); **one or more formable stiffening layers** which enable the composite filter media to be scored and pleated and to hold or retain its pleats; and preferably, a covering layer or a second stiffening layer. Cusick et al., col. 1, ln. 62- col. 2, on 1.

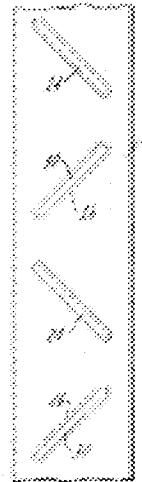
The configuration of the spacers taught in Enbom causes deformation of pleat flanks when the pleated fluid filter arrangement is used in a cartridge-type filter arrangement as shown in FIG.5 of the present application.

Applicant is currently claiming having spaced formed material increments extending in selected lengths centrally oriented between and spaced from filter face crests. Additionally, Applicant is claiming pleat flanks having minimal wave formation as previously discussed. Enbom teaches away from the presently claimed material increments by having material increments adjacent or on the filter face crests causing deformation, teaching away from pleat flanks having minimal wave formation. Cusick et al., Kahler, nor Enbom disclose or even suggest the pleated fluid filter arrangement as claimed in Claim 36, from which Claims 40-42, 48, 50-52, and 54-56 depend, therefore, Applicant's Attorney respectfully requests this rejection be withdrawn.

Claim 49 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kahler in view of Enbom and Cusick and further in view of Niccum et al. (U.S. Patent No. 3,849,314). Niccum et al. teaches:

Looking particularly at FIG. 3, a vertical section through a pleat and illustrating particularly pleat wall 18, note the integral projections of two different types, indicated at 24 and 26, extending from opposite sides of the pleat wall. Projection 24 is illustrated in detail in FIG. 6 and is shown to include a **uniformly shaped depression** 28 having a generally constant depth and a generally constant width. The **depression 28 which forms projection** 24 is substantially longer than it is wide. Of importance, however, is the fact that it has uniform depth and uniform width. Col. 1, ln. 57-67.

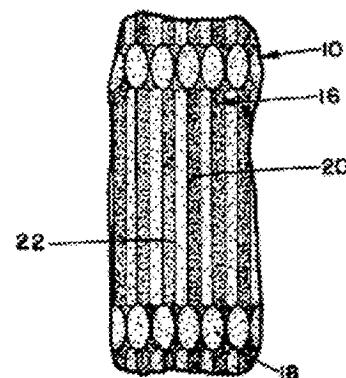
Niccum et al. teaches embossed projections and fails to teach or suggest having spaced formed material increments spaced from filter face crests as currently claimed. Since Kahler, Enbom, Cusick, and Niccum et al. fail to teach or suggest the presently claimed invention, alone or in combination, Applicant's Attorney respectfully requests this rejection be withdrawn.



Claim 53 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kahler in view of Enbom and Cusick and further in view of Osendorf (U.S. Patent No. 5,427,597). Osendorf teaches:

FIG. 2a shows a partial view of a sheet of filter medium 10 which has been **pleated and dimpled**. A plurality of pleats are designated generally as 16. Each pleat 16 has an upstream fold or tip 20 and a downstream fold 22. **Dimples 18 are shown pressed in** both the tips 20 and downstream folds 22 of the pleats 16.

Osendorf teaches the use of dimples and fails to teach or suggest having substantially planar pleat flanks, increments of spaced formed material increments being adhered to the substantially planar surface of adjacent opposed successive pleat flanks, and pleat flanks having minimal wave formation, as currently



claimed. Therefore, the combination of Kahler, Enbom, Cusick et al. and Osendorf fails to teach the currently claimed invention, hence, Applicant's Attorney respectfully requests this rejection be withdrawn.

Claims 57-58 are rejected under 35 U.S.C. §103(a) as being unpatentable over Enbom in view of Cusick and further in view of Kenigsberg et al. (U.S. Patent No. 5,156,780). Kenigsberg et al. teaches:

The present invention comprises a method for treating a porous substrate to achieve permanent water and oil repellency while maintaining the porosity thereof. Kenigsberg et al., col.3, lns. 52-54.

The teachings in Kenigsberg et al. in combination with the teachings in Enbom and Cusick fail to teach the pleated fluid filter arrangement as claimed in Claim 36, from which Claims 57-58 depend, hence Applicant's Attorney respectfully requests this rejection be withdrawn.

Conclusion

Applicant's Attorney asserts that the instant application is in condition for allowance.

Applicant's Attorney therefore respectfully requests that the Examiner allow the pending claims.

However, if the Examiner believes there are other unresolved issues in this case, Applicant's Attorney of record would appreciate a call at (502) 584-1135.

Respectfully submitted,

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